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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,793	08/18/2003	Rui-Hui Wen	10573-US-PA	1792
31561 7590 02/21/2007 JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE 7 FLOOR-1, NO. 100 ROOSEVELT ROAD, SECTION 2 TAIPEI, 100 TAIWAN			EXAMINER KORNAKOV, MICHAEL	
			ART UNIT 1746	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/21/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/604,793

Applicant(s)

WEN, RUI-HUI

Examiner

Michael Kornakov

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment dated 11/21/2006 is acknowledged. Claim 2 is cancelled.

Claim 1 is amended by introducing the limitations of claim 2 and by adding a new limitation, reciting that "the (first, M.K.) wafer anchoring pin extends in a first direction **different from the direction which the wafer carrier beam extends**".

2. Claims 1, 3-12 are currently pending and examined on the merits.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 3-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recited in claim 1 "wafer carrier beams" constitutes an indefinite subject matter, because it is not clear what Applicant regards as carrier beam and the instant disclosure does not describe the carrier beam. Therefore, the structure recited by claim 7 is not readily ascertainable. For examination purposes the term "carrier beam" is given the broadest interpretation.

5. Claims 1, 6, 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita et al (U.S. 5,634,980) in view of Nonomura et al (U.S. 5,601,645).

Tomita teaches semiconductor washing apparatus comprising a chamber having an upper part and a lower part, wherein the upper part accommodates a wafer carrier and the lower part includes drain openings; a wafer carrier; liquid spraying apparatus 22

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(Fig. 6), disposed at a top portion of the chamber; liquid supplying sources with temperature adjusting means (2, 5) connected to spraying means (Fig 1; col. 4; col.5).

The apparatus of Tomita differs from the instantly claimed system by having the chamber with vertical side walls versus a funnel shape as instantly claimed. However, the court held that the configuration of the claimed apparatus is a matter of choice, which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration (funnel shape) of the claimed apparatus is significant, consult *In re Dailey*, 357 F. 2d 669, 149 USPQ 47 (CCPA 1966).

Tomita also remains silent about the specificities of wafer carrier, including a plurality of wafer carrier beams comprising wafer anchoring pins disposed on a peripheral surfaces of the wafer carrier beam, wherein the wafer anchoring pin extends in a first direction different from the direction which the wafer carrier beam extends. However, wafer carriers having structural elements, which include anchoring pins disposed on peripheral surfaces of such elements are known and utilized in the art for supporting the wafer during processing. Thus, Nonomura describes substrate spin treating apparatus comprising substrate holder having elements 5b, wherein projections 5c (reads on "anchoring pins", as instantly claimed) disposed on peripheral surfaces of elements 5b (Fig. 5;) and wherein projections 5c are extended in direction different from the direction in which element 5b extends. Nonomura specifically indicates that such holder structure facilitates transport of wafers and allows the treating liquid to scatter from the periphery of the wafer while preventing mist produced during upper surface treatment from adhering to the lower surface of the substrate.

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Therefore, since both Tomita and Nonomura are concerned with scattering the processing liquid from the wafer surface and Nonomura teaches the wafer holder, which prevents mist produced during the upper surface treatment from adhering to the lower surface of the substrate, one skilled in the art motivated by Nonomura would have found obvious to utilize the holder of Nonomura in order to facilitates transport of wafers and protect the lower surface of the wafer during treatment utilizing the apparatus of Tomita.

With regard to claim 8, Fig. 1 of Tomita provides two nozzles.

With regard to claim 10, Tomita teaches cleaning nozzles 15, 16 for spraying a cleaning solution/fluid into the chamber and therefore the cleaning solution/fluid supply source (apparatus) is inherently present within the teaching of Tomita.

With regard to claims 11, 12, Tomita remains silent about temperature adjustment device to control the temperature of cleaning solution/fluid. However, one skilled in the art would have found obvious to utilize such device, as suggested by Tomita for liquid supplying sources 2 and 5, in order to enhance and accelerate cleaning inside surfaces in the apparatus of Tomita.

Allowable Subject Matter

6. Claims 3-5, 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael Kornakov
Primary Examiner
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02/16/2007